

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Michael R. Conboy

Serial No. 09/678,637

Filed: October 3, 2000

For: Automated Material Handling
System for a Manufacturing Facility
Divided Into Separate Fabrication
Areas

§ Group Art Unit: 2125
§
§ Examiner: Masinick, Michael D.
§
§ Atty. Dkt. No.: 5000-83702
§ TT1555CPA-D

CERTIFICATE OF MAILING
37 C.F.R. § 1.8

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Date

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Sir/Madam:

In response to the Examiner's Answer mailed February 10, 2004, Appellant presents this Reply Brief. Appellant respectfully requests that this reply brief be entered pursuant to 37 C.F.R. § 1.193(b)(1) and considered by the Board of Patent Appeals and Interferences.

REPLY TO EXAMINER'S ANSWER

Claims 16-18 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Harada in view of Sims. In the Appeal Brief, Appellants have argued that Harada in view of Sims does not teach a method of tracking the location of a work piece within a manufacturing facility, wherein the work piece is located within a first fabrication area and is to be transferred to a second fabrication area. Specifically, Sims does not teach or suggest tracking the location of a *work piece* in a *manufacturing* facility between *fabrication* areas. Unlike work pieces referenced in Appellants' invention, the medical equipment being tracked in Sims has already been manufactured. Also, the hospital setting of Sims is clearly not a manufacturing facility having fabrication areas. The teachings of Sims do not pertain to work pieces being transferred between fabrication areas in a manufacturing facility.

The Examiner argues that the tracking device of Sims could be used to track the semiconductor wafer work pieces of Harada by placing the tracking devices upon the containers used to transport the work pieces. Appellants argue that this approach would successfully track only the container's location, not the work piece's location.

In response, the Examiner gives an example of using the device tracking system of Sims to track a medicine pill throughout a hospital by attaching a tracking device on the medicine container. In this example, the Examiner states, “[s]ince the container is moved from one area to another and the pills always remain in the container until consumed, the database would track the location of the pills.” However, Appellants note that once a pill has been removed from the container (just like once a wafer is removed from the wafer boat in Harada) the location of the pill would not be tracked. For instance, using the Examiner's example, the database would not be able to show the location of a pill once it has been removed from the container and is awaiting ingestion by a patient while the original container is being used to dispense medicine in a separate room. Additionally, such a system could not track the location of pills as they are distributed from a bulk

container in the main hospital pharmacy into a smaller container used for daily dispensing. Therefore, Appellants fail to see any relevance in the Examiner's hypothetical example. One would not attempt to track pills using a device that can only track the container. Once the pill has been removed from the container, the tracking device no longer has any ability to report the location of the pill. Appellants also note that the Examiner's example is not found in the teachings of the cited art and therefore is hindsight conjecture by the Examiner. Tracking medicine pill containers is not contemplated in Sims. Moreover, even if the tracking device in Sims was attached to a medicine container, a medicine container is not a work piece in a manufacturing facility. Therefore, the Examiner's example is not relevant to Harada or to Appellant's claimed invention.

Additionally, the Examiner argues, without citing any portion of the reference, "Harada shows the movement of a workpiece in a single cassette from one processing station to another, and when combined with Sims, a database is updated with the location of the workpiece upon movement" (Examiner's Answer states on page 6, line 20 – page 7, line 2). Appellants maintain that Harada teaches that wafers are moved from one cassette to another and point out that the Examiner, regarding claim 18, also argues, "[t]he processing which takes place in Harada takes place at each fabrication area, thus an empty cassette is supplied at each fabrication area" citing Harada, column 4, lines 29-49 and column 1, line 67-column 2, line 2). Therefore, Appellants assert Examiner's argument regarding the combination of Harada and Sims is not supported in the prior art.

The Examiner's rejection appears to be based on the premise that one of ordinary skill in the art would be motivated to track the movement of the semiconductor wafer *work pieces* in Harada from one fabrication area to another. However, the Examiner has not cited any prior art reference that suggests the desirability of tracking work pieces from one fabrication area to another. Sims only suggests tracking equipment. Even in a manufacturing setting, Sims would only suggest tracking manufacturing equipment, not

work pieces. Therefore, the Examiner's motivation for combining the teachings of the references is not supported by any evidence of record.

Furthermore, even if one of ordinary skill in the art was motivated to track the movement of the semiconductor wafer *work pieces* in Harada from one fabrication area to another, he would not use the tracking device of Sims. The tracking device of Sims is bulky, requires tethering, and must be plugged into a stationary connector to report its position. Such a device could not be used to track work pieces flowing through a fabrication process. The Examiner asserts that the Sims device could be used to track work piece containers. However, this is pure conjecture by the Examiner. Sims does not suggest using its device to track any sort of container, especially not a work piece container.

Furthermore, even if one of ordinary skill in the art sought a solution for tracking semiconductor wafers throughout fabrication, the Sims device would not be seen as a desirable solution. The Sims device could not be attached to the wafers themselves. If the Sims device was attached to a wafer container in an attempt to track the movement of the wafer work pieces, the Sims device would only report the position of the container. Once the wafers had been removed from the container (as in Harada), the Sims device would incorrectly report the location of the wafers as the location of the original container. Thus, tracking a work piece container is clearly not a solution for tracking the work pieces themselves.

Further, the Examiner incorrectly characterizes Sims invention as a "tracking system where small transponders are used to track articles around a facility using radio frequency waves to track the position of the items as they move throughout a facility" (Examiner's Answer, page 5, paragraph 3). This is incorrect. Actually, the tracking system of Sims requires that the tag attached to the tracked device be plugged into a connector that is connected to the communication network (See Sims, column 10, lines 34 – 48). It is these connectors that indicate a device's location and different connectors in the

same location can correspond to different states or conditions of devices, such as those ready for use and those in need of repair. (See Sims, column 6, lines 32 – 56, and Figure 1 nodes 29₁₋₃ and communication links 16a-c). Hence these connectors are not mobile, as the Examiner has suggested. Harada's wafer cassettes, transfer pods enclosing the cassettes, ports, and port canopies, are all configured to transfer the cassette between ports and pods "without exposing the cassette and the wafers therein to outside contamination" (Harada, abstract). One of ordinary skill in the art would not attempt to use the type of tracking device in Sims in a semiconductor manufacturing facility such as in Harada.

Sims uses an electronic "Tag 30 [that] includes an integrated circuit memory 32 disposed within a metal housing 34.... Housing 34 is press fit onto one end of a plastic card 44 ... the opposite end of which is ... attached to the device 12 by a tether 46 (e.g. an 18" steel cord)." Such a tracking device could not be attached to a semiconductor wafer during manufacturing without destroying the semiconductor wafer. Nor would one of ordinary skill in the art attach this type of device to a wafer cassette in the semiconductor manufacturing environment of Sims. Therefore, one of ordinary skill in the art would not have any motivation to apply the teaching of Sims to Harada.

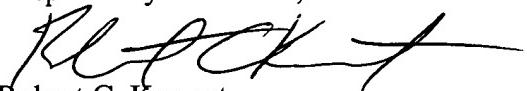
Additionally, Appellants have argued that Sims is non-analogous art and therefore the combination of Harada and Sims is improper. In response, the Examiner has cited a passage stating that Sims invention is "broadly applicable to ... any facility (e.g. manufacturing plants, etc) in which it is desirable to monitor the locations and/or conditions of devices" (Sims, column 22, lines 32-37). However such a general boilerplate statement at the end of the Sims reference does not automatically mean that a system for managing an inventory of hospital equipment (Sims, column 5, lines 4-9) falls into field of Appellants' endeavor. Despite the brief reference to manufacturing facilities, Sims teachings are clearly presented in the field on tracking hospital equipment. One of ordinary skill in the art looking for a solution for tracking work pieces, would not look to Sims. Furthermore, even if Sims could be considered to fall within the field of tracking

equipment in a manufacturing facility, it would still not apply to Appellant's field of endeavor. Appellant's field of endeavor pertains to the tracking of *work pieces* between fabrication areas in a manufacturing facility. Even in a manufacturing setting, Sims would only apply to tracking the location of manufacturing equipment, not workpieces. See, *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1991). Thus, Sims is not within Appellants' field of endeavor and is not pertinent to the particular problem addressed by Appellants' invention. Accordingly, Sims is non-analogous art and cannot properly be used to reject Appellants' claims under 35 U.S.C. § 103.

CONCLUSION

For the foregoing reasons submitted in the Appeal Brief and this Reply Brief, it is submitted that the Examiner's rejection of claims 16-18 was erroneous. Reversal of the Examiner's decision is respectfully requested.

Respectfully submitted,


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